Abstract

Methods and systems that (a) adaptively segment a raw data stream(s) of different type biomedical signals; (b) assign attribute values to each segment; (c) determine an attribute domain based on a point corresponding to said segment attribute value; (d) generate a cluster set(s) in said attribute domain that includes a combination of points; (e) obtain a probability of order of appearance of each cluster point, according to its property value; (f) use said probability to update each point's property value; (g) repeat (d) through (f) while varying combinations of points in clusters according to their most updated property values and points derived from additional raw data stream adaptive segmentations; (h) associate at least one updated cluster with a normal/abnormal physiological state based on reference clusters in said domain; and (i) obtain the change probability between normal/abnormal physiological states using said probability of the order of appearance.